

CLAIMS

- 1 1. An apparatus comprising:
2 (A) at least one processor;
3 (B) a memory coupled to the at least one processor;
4 (C) a shared resource coupled to the at least one processor, wherein sharing of the
5 shared resource is controlled by a shared resource server; and
6 (D) a resource sharing mechanism residing in the memory and executed by the at
7 least one processor, the resource sharing mechanism including:
8 a first mechanism that establishes a layer two tunneling protocol (L2TP)
9 tunnel between the shared resource server and a client;
10 a second mechanism that establishes an outgoing connection from the
11 client through the shared resource via the L2TP tunnel using a plurality of
12 messages defined by a predefined L2TP protocol for the L2TP tunnel; and
13 a third mechanism that establishes an incoming connection through the
14 shared resource to the client via the L2TP tunnel using a plurality of messages
15 defined by user-defined extensions to the L2TP protocol for the L2TP tunnel.
- 1 2. The apparatus of claim 1 wherein the client resides in a second logical partition on
2 the apparatus that is separate from a first logical partition that includes the shared
3 resource.
- 1 3. The apparatus of claim 1 wherein the client comprises a computer system coupled
2 to the apparatus via a network connection.
- 1 4. The apparatus of claim 1 wherein the shared resource comprises a modem.

1 5. The apparatus of claim 1 wherein the shared resource comprises a virtual private
2 network (VPN).

1 6. The apparatus of claim 1 wherein the incoming and outgoing connections are
2 point-to-point connections.

1 7. The apparatus of claim 1 wherein the plurality of messages defined by the user-
2 defined extensions to the L2TP protocol comprise an accept incoming call request
3 message and an accept incoming call reply message.

- 1 8. An apparatus comprising:
2 (A) at least one processor;
3 (B) a memory coupled to the at least one processor;
4 (C) first and second logical partitions defined on the apparatus, the first logical
5 partition including a shared resource server that controls a shared resource;
6 (D) a resource sharing mechanism residing in the first logical partition, the
7 resource sharing mechanism including:
8 a first mechanism that establishes a layer two tunneling protocol (L2TP)
9 tunnel between the shared resource server and a client that resides in the second
10 logical partition;
11 a second mechanism that establishes an outgoing connection from the
12 client through the shared resource via the L2TP tunnel using a plurality of
13 messages defined by a predefined L2TP protocol for the L2TP tunnel; and
14 a third mechanism that establishes an incoming connection through the
15 shared resource to the client in the second logical partition via the L2TP tunnel
16 using a plurality of messages defined by user-defined extensions to the L2TP
17 protocol for the L2TP tunnel.
- 1 9. The apparatus of claim 8 wherein the shared resource comprises a modem.
- 1 10. The apparatus of claim 8 wherein the shared resource comprises a virtual private
2 network (VPN).
- 1 11. The apparatus of claim 8 wherein the incoming and outgoing connections are
2 point-to-point connections.

1 12. The apparatus of claim 8 wherein the plurality of messages defined by the user-
2 defined extensions to the L2TP protocol comprise an accept incoming call request
3 message and an accept incoming call reply message.

- 1 13. A computer-implemented method for sharing a shared resource between a
2 resource server that controls the shared resource and a client, the method comprising the
3 steps of:
4 (A) establishing a layer two tunneling protocol (L2TP) tunnel between the
5 resource server and the client;
6 (B) establishing an outgoing connection from the client through the shared
7 resource via the L2TP tunnel using a plurality of messages defined by a predefined L2TP
8 protocol for the L2TP tunnel; and
9 (C) establishing an incoming connection through the shared resource to the client
10 via the L2TP tunnel using a plurality of messages defined by user-defined extensions to
11 the L2TP protocol for the L2TP tunnel.
- 1 14. The method of claim 13 wherein the client resides in a second logical partition
2 that is separate from a first logical partition that includes the shared resource.
- 1 15. The method of claim 13 wherein the client comprises a computer system coupled
2 to the resource server via a network connection.
- 1 16. The method of claim 13 wherein the shared resource comprises a modem.
- 1 17. The method of claim 13 wherein the shared resource comprises a virtual private
2 network (VPN).
- 1 18. The method of claim 13 wherein the incoming and outgoing connections are
2 point-to-point connections.

- 1 19. The method of claim 13 wherein the plurality of messages defined by the user-
- 2 defined extensions to the L2TP protocol comprise an accept incoming call request
- 3 message and an accept incoming call reply message.

- 1 20. A computer-implemented method for sharing a shared resource between a
2 resource server in a first logical partition that controls the shared resource and a client in a
3 second logical partition, the method comprising the steps of:
4 establishing a layer two tunneling protocol (L2TP) tunnel between the resource
5 server and the client;
6 establishing an outgoing connection from the client through the shared resource
7 via the L2TP tunnel using a plurality of messages defined by a predefined L2TP protocol
8 for the L2TP tunnel; and
9 establishing an incoming connection through the shared resource to the client in
10 the second logical partition via the L2TP tunnel using a plurality of messages defined by
11 user-defined extensions to the L2TP protocol for the L2TP tunnel.
- 1 21. The method of claim 20 wherein the shared resource comprises a modem.
- 1 22. The method of claim 20 wherein the shared resource comprises a virtual private
2 network (VPN).
- 1 23. The method of claim 20 wherein the incoming and outgoing connections are
2 point-to-point connections.
- 1 24. The method of claim 20 wherein the plurality of messages defined by the user-
2 defined extensions to the L2TP protocol comprise an accept incoming call request
3 message and an accept incoming call reply message.

1 25. A program product comprising:
2 (A) resource sharing mechanism including:
3 a first mechanism that establishes a layer two tunneling protocol (L2TP)
4 tunnel between a shared resource server that controls a shared resource and a
5 client;
6 a second mechanism that establishes an outgoing connection from the
7 client through the shared resource via the L2TP tunnel using a plurality of
8 messages defined by a predefined L2TP protocol for the L2TP tunnel; and
9 a third mechanism that establishes an incoming connection through the
10 shared resource to the client via the L2TP tunnel using a plurality of messages
11 defined by user-defined extensions to the L2TP protocol for the L2TP tunnel; and
12 (B) computer readable signal bearing media bearing the resource sharing
13 mechanism.

1 26. The program product of claim 25 wherein the signal bearing media comprises
2 recordable media.

1 27. The program product of claim 25 wherein the signal bearing media comprises
2 transmission media.

1 28. The program product of claim 25 wherein the client resides in a second logical
2 partition on the apparatus that is separate from a first logical partition that includes the
3 shared resource.

1 29. The program product of claim 25 wherein the client comprises a computer system
2 coupled to an apparatus that includes the resource sharing mechanism via a network
3 connection.

1 30. The program product of claim 25 wherein the shared resource comprises a
2 modem.

1 31. The program product of claim 25 wherein the shared resource comprises a virtual
2 private network (VPN).

1 32. The program product of claim 25 wherein the incoming and outgoing connections
2 are point-to-point connections.

1 33. The program product of claim 25 wherein the plurality of messages defined by the
2 user-defined extensions to the L2TP protocol comprise an accept incoming call request
3 message and an accept incoming call reply message.

1 34. A program product comprising:
2 (A) a resource sharing mechanism residing in a first logical partition, the resource
3 sharing mechanism including:
4 a first mechanism that establishes a layer two tunneling protocol (L2TP)
5 tunnel between a shared resource server in the first logical partition that controls a
6 shared resource and a client that resides in a second logical partition;
7 a second mechanism that establishes an outgoing connection from the
8 client through the shared resource via the L2TP tunnel using a plurality of
9 messages defined by a predefined L2TP protocol for the L2TP tunnel; and
10 a third mechanism that establishes an incoming connection through the
11 shared resource to the client via the L2TP tunnel using a plurality of messages
12 defined by user-defined extensions to the L2TP protocol for the L2TP tunnel; and
13 (B) computer readable signal bearing media bearing the partition manager.

1 35. The program product of claim 34 wherein the signal bearing media comprises
2 recordable media.

1 36. The program product of claim 34 wherein the signal bearing media comprises
2 transmission media.

1 37. The program product of claim 34 wherein the shared resource comprises a
2 modem.

1 38. The program product of claim 34 wherein the shared resource comprises a virtual
2 private network (VPN).

1 39. The program product of claim 34 wherein the incoming and outgoing connections
2 are point-to-point connections.

1 40. The program product of claim 34 wherein the plurality of messages defined by the
2 user-defined extensions to the L2TP protocol comprise an accept incoming call request
3 message and an accept incoming call reply message.

* * * * *